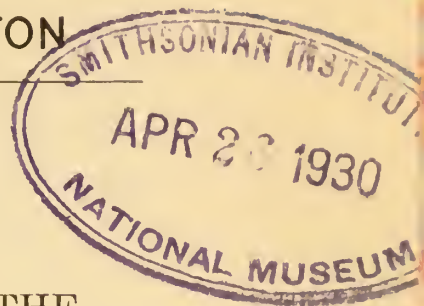


PROCEEDINGS
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A CHARACTER FOR RECOGNITION OF THE
FAMILY MEMBRACIDAE.

BY W. L. McATEE AND J. R. MALLOCH.

Recent publications bear evidence that there is at present no clearcut understanding of the scope of the family Membracidae. Funkhouser's Catalogue¹ (p. 341) says of the genus *Aethalion*, "Not a membracid genus. Should probably be considered a distinct family, the Aethalionidae." China states² that Goding has described two genera of Cicadellidae as Membracidae and in his reply³ to this article Goding admits that another genus described as a membracid by him is a Heteropteron. These various genera, *Williamsiana*, *Eustollia* (Cicadellidae), and *Eufroggattia* (Pentatomidae), as well as the genus *Xerophyllum* Fairmaire (Acridiidae) are listed in the Funkhouser catalogue.

The definition of Membracidae quoted by Goding (l. c.) from Distant is so generalized it does not distinguish the group from certain representatives of the Cicadidae, Cicadellidae, and Cercopidae, nor even from some Heteroptera. Hansen according to Kirkaldy lumps the Membracidae with the Jassidae, but writers on Membracidae though undoubtedly having assumptions, at least, as to the extent of the group have mostly refrained from defining it either positively or negatively.

In view of this state of affairs, the writers deem it timely to mention a character for recognition of Membracidae which they first studied several years ago. It occurs in such highly modified groups as *Bolbonotus* and Tragopinae, and also in those in which the pronotum is little specialized. Conversely it does not occur so far as we can discover in any other Homoptera.

¹Funkhouser, W. D., Gen. Cat. Hemip. Fasc. 1, Smith College, Mass., 1927, 581 pp.

²China, W. E., Ann. Mag. Nat. Hist. 9th Ser., No. 114, June, 1927, pp. 625-627.

³Goding, F. W., Ann. Mag. Nat. Hist., 9th Ser., No. 119, Nov., 1927, pp. 541-542.

Funkhouser alludes¹ to the character in part as the episternal hook, which he says is found in the great majority of the genera but not in all. The character in full as we would define it is, mesopleurum with a process or lobe either at or near anterolateral angle, or just below middle of anterior margin, or both, processes which overlap the propleurum, in many cases fitting into excavations along posterior margin of that sclerite. These processes, reversing so far as they go the normal order of overlapping of the segments, seem quite significant, and we regard them as the best criterion thus far advanced for recognition of the family Membracidae. The accompanying figures indicate the appearance of these mesopleural processes in a number of the genera.

EXPLANATION OF PLATE.

- Fig. 1. *Aethalion reticulatum*.
“ 2. *Aethalion quadratum*.
“ 3. *Oeda inflata*.
“ 4. *Antianthe expansa*.
“ 5. *Membracis albolimbata*.
“ 6. *Bolbonota cuneata*.
“ 7. *Tragopa involuta*.
“ 8. *Lycoderes galeritus*.
“ 9. *Stegaspis viridis*.
“ 10. *Darthula hardwicki* (now listed as a Membracid but apparently incorrectly so).
“ 11. *Homalodisca triquetra* (Cicadellid).

N. B. The arrows on Fig. 9 indicate the overlapping mesopleural processes.

¹Mem. 11, Cornell Univ. Agr. Exp. Sta., 1917, p. 322.



Mesopleural processes in Membracidae.